

IN THE CLAIMS

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~~Add the following new claims:~~

26. (NEW) A method of processing received data for delivery to a respective one of a plurality of processing devices, each of said plurality of processing devices having a corresponding address, said method comprising:

reading an address from a portion of said received data; and

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decoding said portion of said received data to form decoded data when said portion of said received data is intended for a group of said processing devices that includes said respective one of said plurality of processing devices or when said portion of said received data is intended solely for said respective one of said plurality of processing devices;

said portion of said received data being determined to be intended for said group by comparing at least a segment of said read address to a corresponding segment of a stored address that is associated with said group, said segment of said read address and said corresponding segment of said stored address being identified by a stored mask sequence; and

said portion of said received data being determined to be intended solely for said respective one of said plurality of processing devices by comparing said read address to said corresponding address of said respective one of said plurality of processing devices.

27. (NEW) The method of claim 26, wherein said decoding step includes decoding said portion of said received data when said portion of said received data is intended for all of said plurality of processing devices.

28. (NEW) The method of claim 27, wherein said portion of said received data is intended for all of said plurality of

processing devices when at least said segment of said read address is a predefined broadcast value.

29. (NEW) The method of claim 26, wherein said segment of said read address is compared to said corresponding segment of said stored address by comparing, for each bit position identified by said stored mask sequence, a bit of said read address with its corresponding bit of said stored address.

30. (NEW) The method of claim 26, wherein at least a segment of said corresponding address of each processing device of said group is common to all of said group, and said mask sequence identifies said bit positions of said common segment.

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31. (NEW) The method of claim 26, wherein said corresponding address of each processing device of said group is associated with a stored further address, at least a segment of said stored further address being common to all of said group, and said mask sequence identifies said bit positions of said common segment.

32. (NEW) The method of claim 26, wherein said segment of said read address is compared with said corresponding segment of said stored address only when a stored value associated with said stored address indicates that said stored address is in a valid state.

33. (NEW) The method of claim 26, wherein said read address is compared with said corresponding address by converting said read address into a value having fewer bits than said read address and then comparing said converted value to a stored value associated with said corresponding address.

34. (NEW) The method of claim 33, wherein said read address is converted using a Hash function, and said stored value is stored in a Hash table.

35. (NEW) The method of claim 26, wherein said decoding step includes determining whether said portion of said received data is encrypted, and when said portion of said

received data is encrypted, decrypting said portion of said received data using a decryption key that is either a private key or a public key.

36. (NEW) The method of claim 35, wherein a determination of whether to decrypt said portion of said received data using either said private key or said public key is carried out based on an indicator read from said portion of said received data.

37. (NEW) The method of claim 35, wherein a determination of whether to decrypt said portion of said received data using either an even period decryption key or an odd period decryption key is carried out based on an indicator read from said portion of said received data.

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38. (NEW) The method of claim 26, wherein a table is searched to determine whether said read address indicates that said portion of said received data is intended for said group or is intended solely for said respective one of said plurality of processing devices, and when said portion of said received data is encrypted, said table is again searched to locate said stored address that coincides with said read address and then a decryption key corresponding to said stored address is retrieved.

39. (NEW) The method of claim 38, wherein said decryption key is retrieved only when a stored value associated with said decryption key indicates that said decryption key is in a valid state.

40. (NEW) An apparatus for processing received data for delivery to a respective one of a plurality of processing devices, each of said plurality of processing devices having a corresponding address, said apparatus comprising:

a decoder for reading an address from a portion of said received data, and for decoding said portion of said received data to form decoded data when said portion of said received

data is intended for a group of said processing devices that includes said respective one of said plurality of processing devices or when said portion of said received data is intended solely for said respective one of said plurality of processing devices;

said portion of said received data being determined to be intended for said group by comparing at least a segment of said read address to a corresponding segment of a stored address that is associated with said group, said segment of said read address and said corresponding segment of said stored address being identified by a stored mask sequence; and

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said portion of said received data being determined to be intended solely for said respective one of said plurality of processing devices by comparing said read address to said corresponding address of said respective one of said plurality of processing devices.

41. (NEW) The apparatus of claim 40, wherein said decoder decodes said portion of said received data when said portion of said received data is intended for all of said plurality of processing devices.

42. (NEW) The apparatus of claim 41, wherein said portion of said received data is intended for all of said plurality of processing devices when at least said segment of said read address is a predefined broadcast value.

43. (NEW) The apparatus of claim 40, wherein said decoder compares said segment of said read address to said corresponding segment of said stored address by comparing, for each bit position identified by said stored mask sequence, a bit of said read address with its corresponding bit of said stored address.

44. (NEW) The apparatus of claim 40, wherein at least a segment of said corresponding address of each processing device of said group is common to all of said group, and said

mask sequence identifies said bit positions of said common segment.

45. (NEW) The apparatus of claim 40, wherein said corresponding address of each processing device of said group is associated with a stored further address, at least a segment of said stored further address being common to all of said group, and said mask sequence identifies said bit positions of said common segment.

46. (NEW) The apparatus of claim 40, wherein said decoder compares said segment of said read address with said corresponding segment of said stored address only when a stored value associated with said stored address indicates that said stored address is in a valid state.

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47. (NEW) The apparatus of claim 40, wherein said decoder compares said read address with said corresponding address by converting said read address into a value having fewer bits than said read address and then compares said converted value to a stored value associated with said corresponding address.

48. (NEW) The apparatus of claim 47, wherein said decoder converts said read address using a Hash function, and said stored value is stored in a Hash table.

49. (NEW) The apparatus of claim 40, wherein said decoder determines whether said portion of said received data is encrypted, and when said portion of said received data is encrypted, decrypts said portion of said received data using a decryption key that is either a private key or a public key.

50. (NEW) The apparatus of claim 49, wherein said decoder carries out a determination of whether to decrypt said portion of said received data using either said private key or said public key based on an indicator read from said portion of said received data.

51. (NEW) The apparatus of claim 49, wherein said decoder carries out a determination of whether to decrypt said portion of said received data using either an even period decryption key or an odd period decryption key based on an indicator read from said portion of said received data.

52. (NEW) The apparatus of claim 40, wherein said decoder searches a table to determine whether said read address indicates that said portion of said received data is intended for said group or is intended solely for said respective one of said plurality of processing devices, and when said portion of said received data is encrypted, said decoder again searches said table to locate said stored address that coincides with said read address and then retrieves a decryption key corresponding to said stored address.

53. (NEW) The apparatus of claim 52, wherein said decoder retrieves said decryption key only when a stored value associated with said decryption key indicates that said decryption key is in a valid state.

54. (NEW) A readable medium recorded with instructions for processing received data for delivery to a respective one of a plurality of processing devices, each of said plurality of processing devices having a corresponding address, said instructions comprising:

reading an address from a portion of said received data;  
and

decoding said portion of said received data to form decoded data when said portion of said received data is intended for a group of said processing devices that includes said respective one of said plurality of processing devices or when said portion of said received data is intended solely for said respective one of said plurality of processing devices;

said portion of said received data being determined to be intended for said group by comparing at least a segment of said

read address to a corresponding segment of a stored address that is associated with said group, said segment of said read address and said corresponding segment of said stored address being identified by a stored mask sequence; and

    said portion of said received data being determined to be intended solely for said respective one of said plurality of processing devices by comparing said read address to said corresponding address of said respective one of said plurality of processing devices.

55. (NEW)     A method of delivering data to a respective one of a plurality of processing devices, each of said plurality of processing devices having a corresponding address, said method comprising:

        receiving transmitted data;

        reading an address from a portion of said received data;

        decoding said portion of said received data to form decoded data when said portion of said received data is intended for a group of said processing devices that includes said respective one of said plurality of processing devices or when said portion of said received data is intended solely for said respective one of said plurality of processing devices; and

        delivering said decoded data to said respective one of said plurality of processing devices;

    said portion of said received data being determined to be intended for said group by comparing at least a segment of said read address to a corresponding segment of a stored address that is associated with said group, said segment of said read address and said corresponding segment of said stored address being identified by a stored mask sequence; and

    said portion of said received data being determined to be intended solely for said respective one of said plurality of processing devices by comparing said read address to said corresponding address of said respective one of said plurality of

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56. (NEW) An apparatus for delivering data to a respective one of a plurality of processing devices, each of said plurality of processing devices having a corresponding address, said apparatus comprising:

a receiver for receiving transmitted data;

a decoder for reading an address from a portion of said received data, decoding said portion of said received data to form decoded data when said portion of said received data is intended for a group of said processing devices that includes said respective one of said plurality of processing devices or when said portion of said received data is intended solely for said respective one of said plurality of processing devices, and delivering said decoded data to said respective one of said plurality of processing devices;

said portion of said received data being determined to be intended for said group by comparing at least a segment of said read address to a corresponding segment of a stored address that is associated with said group, said segment of said read address and said corresponding segment of said stored address being identified by a stored mask sequence; and

said portion of said received data being determined to be intended solely for said respective one of said plurality of processing devices by comparing said read address to said corresponding address of said respective one of said plurality of processing devices.

57. (NEW) A readable medium recorded with instructions for delivering data to a respective one of a plurality of processing devices, each of said plurality of processing devices having a corresponding address, said instructions comprising:

receiving transmitted data;

reading an address from a portion of said received data;

decoding said portion of said received data to form decoded data when said portion of said received data is intended for a group of said processing devices that includes said respective one of said plurality of processing devices or when said portion of said received data is intended solely for said respective one of said plurality of processing devices; and

delivering said decoded data to said respective one of said plurality of processing devices;

said portion of said received data being determined to be intended for said group by comparing at least a segment of said read address to a corresponding segment of a stored address that is associated with said group, said segment of said read address and said corresponding segment of said stored address being identified by a stored mask sequence; and

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said portion of said received data being determined to be intended solely for said respective one of said plurality of processing devices by comparing said read address to said corresponding address of said respective one of said plurality of processing devices.

58. (NEW) A method of processing data for transmission to at least one of a plurality of processing devices, each of said plurality of processing devices having a corresponding address, said method comprising:

encoding at least a portion of said data; and

attaching a control address to said portion of said data, said control address being associated with said corresponding address of a respective one of said plurality of processing devices when said portion of said data is intended solely for said respective one of said plurality of processing devices, at least a segment of said control address being associated with a group of said processing devices when said portion of said data is intended for each of said processing devices in said group.

59. (NEW) The method of claim 58, wherein said segment of said control address is a predefined broadcast value when said portion of said data is intended for all of said plurality of processing devices.

60. (NEW) The method of claim 58, wherein at least a segment of said corresponding address of each processing device of said group is common to all of said processing devices in said group, and when said portion of the data is intended for each of said processing devices in said group, said segment of said control address comprises said segment of said corresponding address.

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61. (NEW) The method of claim 58, wherein said corresponding address of each of said processing devices in said group is associated with a further address, at least a segment of said further address being common to all of said processing devices in said group, and when said portion of said data is intended for each of said processing devices in said group, said segment of said control address comprises said segment of said further address.

62. (NEW) The method of claim 58, wherein, when said portion of said data is intended solely for said respective one of said plurality of processing devices, said control address is convertible into a value having fewer bits than said control address, said converted value being associated with said corresponding address.

63. (NEW) The method of claim 58, wherein said encoding step includes attaching a flag indicating whether said portion of said data is encrypted.

64. (NEW) The method of claim 58, wherein said encoding step includes encrypting said portion of said data using an encryption key associated with said control address.

65. (NEW) The method of claim 64, wherein, when said portion of said data is intended solely for said respective one

of said plurality of processing devices, said encryption key corresponds to said respective one of said plurality of processing devices.

66. (NEW) The method of claim 64, wherein, when said portion of said data is intended for said respective one of said plurality of processing devices, said encryption key corresponds to said group.

67. (NEW) The method of claim 64, wherein said encoding step includes determining whether said encryption key is to be changed from an odd period encryption key to an even period encryption key or from an even period encryption key to an odd period encryption key.

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68. (NEW) The method of claim 64, wherein said encoding step includes attaching a flag indicating whether said portion of said data is encrypted using an even period encryption key or an odd period encryption key.

69. (NEW) An apparatus for processing data for transmission to at least one of a plurality of processing devices, each of said plurality of processing devices having a corresponding address, said apparatus comprising:

an encoder for encoding at least a portion of said data and for attaching a control address to said portion of said data, said control address being associated with said corresponding address of a respective one of said plurality of processing devices when said portion of said data is intended solely for said respective one of said plurality of processing devices, at least a segment of said control address being associated with a group of said processing devices when said portion of said data is intended for each of said processing devices in said group.

70. (NEW) The apparatus of claim 69, wherein said segment of said control address is a predefined broadcast value when said portion of said data is intended for all of said plurality of processing devices.

71. (NEW) The apparatus of claim 69, wherein at least a segment of said corresponding address of each processing device of said group is common to all of said processing devices in said group, and when said portion of said data is intended for each of said processing devices in said group, said segment of said control address comprises said segment of said corresponding address.

72. (NEW) The apparatus of claim 69, wherein said corresponding address of each of said processing devices in said group is associated with a further address, at least a segment of said further address being common to all of said processing devices in said group, and when said portion of the data is intended for each of said processing devices in said group, said segment of said control address comprises said segment of said further address.

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73. (NEW) The apparatus of claim 69, wherein, when said portion of said data is intended solely for said respective one of said plurality of processing devices, said control address is convertible into a value having fewer bits than said control address, said converted value being associated with said corresponding address.

74. (NEW) The apparatus of claim 69, wherein said encoder attaches a flag indicating whether said portion of said data is encrypted.

75. (NEW) The apparatus of claim 69, wherein said encoder encrypts said portion of said data using an encryption key associated with said control address.

76. (NEW) The apparatus of claim 75, wherein, when said portion of said data is intended solely for said respective one of said plurality of processing devices, said encryption key corresponds to said respective one of said plurality of processing devices.

77. (NEW) The apparatus of claim 75, wherein, when said portion of said data is intended for said respective one of said plurality of processing devices, said encryption key corresponds to said group.

78. (NEW) The apparatus of claim 75, wherein said encoder determines whether said encryption key is to be changed from an odd period encryption key to an even period encryption key or from an even period encryption key to an odd period encryption key.

79. (NEW) The apparatus of claim 75, wherein said encoder attaches a flag indicating whether said portion of said data is encrypted using an even period encryption key or an odd period encryption key.

80. (NEW) A readable medium recorded with instructions for processing data for transmission to at least one of a plurality of processing devices, each of said plurality of processing devices having a corresponding address, said instructions comprising:

encoding at least a portion of said data; and  
attaching a control address to said portion of said data, said control address being associated with said corresponding address of a respective one of said plurality of processing devices when said portion of said data is intended solely for said respective one of said plurality of processing devices, at least a segment of said control address being associated with a group of said processing devices when said portion of said data is intended for each of said processing devices in said group.

81. (NEW) A method of transmitting data to at least one of a plurality of processing devices, each of said plurality of processing devices having a corresponding address, said method comprising:

encoding at least a portion of said data;  
attaching a control address to said portion of said data,

said control address being associated with said corresponding address of a respective one of said plurality of processing devices when said portion of said data is intended solely for said respective one of said plurality of processing devices, at least a segment of said control address being associated with a group of said processing devices when said portion of said data is intended for each of said processing devices in said group; and

transmitting said portion of said data.

82. (NEW) An apparatus for transmitting data to at least one of a plurality of processing devices, each of said plurality of processing devices having a corresponding address, said apparatus comprising:

an encoder for encoding at least a portion of said data and for attaching a control address to said portion of said data, said control address being associated with said corresponding address of a respective one of said plurality of processing devices when said portion of said data is intended solely for said respective one of said plurality of processing devices, at least a segment of said control address being associated with a group of said processing devices when said portion of said data is intended for each of said processing devices in said group; and

a transmitter for transmitting said portion of said data.

83. (NEW) A readable medium recorded with instructions for transmitting data to at least one of a plurality of processing devices, each of said plurality of processing devices having a corresponding address, said instructions comprising:

encoding at least a portion of said data;

attaching a control address to said portion of said data, said control address being associated with said corresponding address of a respective one of said plurality of processing devices when said portion of said data is intended solely for

said respective one of said plurality of processing devices, at least a segment of said control address being associated with a group of said processing devices when said portion of said data is intended for each of said processing devices in said group; and

transmitting said portion of the data.

84. (NEW) A method of sending data to at least one of a plurality of processing devices, each of said plurality of processing devices having a corresponding address, said method comprising:

encoding at least a portion of said data;

attaching a control address to said portion of said data, said control address being associated with said corresponding address of a respective one of said plurality of processing devices when said portion of said data is intended solely for said respective one of said plurality of processing devices, at least a segment of said control address being associated with a group of said processing devices when said portion of said data is intended for each of said processing devices in said group;

transmitting said portion of said data;

receiving said portion of said data;

reading said control address from said portion of said data;

decoding said portion of the data to form decoded data when said portion of said data is intended for a group of said processing devices that includes said respective one of said plurality of processing devices or when said portion of said data is intended solely for said respective one of said plurality of processing devices; and

delivering said decoded data to said respective one of said plurality of processing devices;

said portion of said data being determined to be intended for said group by comparing at least a segment of said control

address to a corresponding segment of a stored address that is associated with said group, said segment of said control address and said corresponding segment of said stored address being identified by a stored mask sequence; and

    said portion of said data being determined to be intended solely for said respective one of said plurality of processing devices by comparing said control address to said corresponding address of said respective one of said plurality of processing devices.

85. (NEW)     A system for sending data to at least one of a plurality of processing devices, each of said plurality of processing devices having a corresponding address, said system comprising:

    an apparatus for transmitting data, said apparatus comprising:

        an encoder for encoding at least a portion of said data and for attaching a control address to said portion of said data, said control address being associated with said corresponding address of a respective one of said plurality of processing devices when said portion of said data is intended solely for said respective one of said plurality of processing devices, at least a segment of said control address being associated with a group of said processing devices when said portion of said data is intended for each of said processing devices in said group; and

        a transmitter for transmitting said portion of the data; and

    an apparatus for receiving data, said apparatus comprising:

        a receiver for receiving said portion of said data; and

        a decoder for reading said control address from said portion of said data, decoding said portion of the data to form decoded data when said portion of the data is intended for a

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group of said processing devices that includes said respective one of said plurality of processing devices or when said portion of said data is intended solely for said respective one of said plurality of processing devices, and delivering said decoded data to said respective one of said plurality of processing devices;

said portion of said data being determined to be intended for said group by comparing at least a segment of said control address to a corresponding segment of a stored address that is associated with said group, said segment of said control address and said corresponding segment of said stored address being identified by a stored mask sequence; and

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said portion of said data being determined to be intended solely for said respective one of said plurality of processing devices by comparing said control address to said corresponding address of said respective one of said plurality of processing devices.

86. (NEW) At least one readable medium recorded with instructions for sending data to at least one of a plurality of processing devices, each of said plurality of processing devices having a corresponding address, said instructions comprising:

encoding at least a portion of said data;

attaching a control address to said portion of said data, said control address being associated with said corresponding address of a respective one of said plurality of processing devices when said portion of said data is intended solely for said respective one of said plurality of processing devices, at least a segment of said control address being associated with a group of said processing devices when said portion of said data is intended for each of said processing devices in said group;

transmitting said portion of said data;

receiving said portion of said data;

reading said control address from said portion of said data;

decoding said portion of said data to form decoded data when said portion of said data is intended for a group of said processing devices that includes said respective one of said plurality of processing devices or when said portion of said data is intended solely for said respective one of said plurality of processing devices; and

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cmek.* delivering said decoded data to said respective one of said plurality of processing devices;

said portion of said data being determined to be intended for said group by comparing at least a segment of said control address to a corresponding segment of a stored address that is associated with said group, said segment of said control address and said corresponding segment of said stored address being identified by a stored mask sequence; and

said portion of said data being determined to be intended solely for said respective one of said plurality of processing devices by comparing said control address to said corresponding address of said respective one of said plurality of processing devices.

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